

IN THE CLAIMS

Please cancel claims 1-9 and add new claims 10-18.

10. An injector for injecting fuel that is at high pressure into the combustion chambers of an internal combustion engine, the injector comprising
a control part (4) guided movably in a housing (2), which control part is movable vertically up and down, actuator-actuated, in a bore (3) of the housing (2) of the injector (1),

the control part (4) being actuatable by means of an actuator element which moves the control part (4) into a position that enables the fuel delivery into a nozzle inlet (10, 11),

the valve chamber (8, 38) being opened and closed during the injection phases (41, 42) by control edges (36, 37) toward the control part, and

a pressure relief of the injection nozzle system (11, 12, 34) being effected via leak fuel slides (13, 21) embodied on the control part (4).

11. The injector of claim 10, further comprising an actuator that triggers two switching stages disposed above the control part (4).

12. The injector of claim 10, wherein, during the preinjection phase (41), the head region (6) of the control part (4) is placed in contact with a second control edge (37) on the housing (2) of the injector.

13. The injector of claim 10, wherein, during the main injection phase (42), the head region (5) of the control part (4) is placed in a middle position relative to the valve chamber (8, 38) surrounding it.

14. The injector of claim 13, further comprising a diameter graduation of the valve chamber diameter (9) to the head region diameter (6), the diameter graduation acting as a throttle and limits the flow in the middle position of the head region (6) of the control part (4) in the valve chamber (8, 38).

15. The injector of claim 10, wherein the coincidence of the stroke paths h_1 , h_2 at the head region (6) of the control part (4) is equal to that of the stroke paths h_3 , h_4 of the slide elements (13, 21) of the control part (4) on the downstream side.

16. The injector of claim 10, wherein the injection nozzle system (11, 12, 34), after the preinjection phase (41), is pressure-relieved to the leak fuel line (16) via an annular chamber (22) on the lower slide element (21).

17. The injector of claim 10, wherein the injection nozzle system (11, 12, 34), after the main injection phase (42), is pressure-relieved via an annular leak fuel chamber (14) provided on the upper slide element (13).

18. The injector of claim 10, wherein all the guide and seat diameters of the control part (4) have the same diameter (7), and wherein the control part (4) is force-balanced.